



# HOL90017D

## Hollo-Blast Pipe Cleaning Tool

### Owner's Manual

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**CE MACHINERY DIRECTIVE  
(2006/42/EC)**



**CE DECLARATION OF CONFORMITY**

We HODGE CLEMCO LTD declare that the supplied equipment when installed and used in accordance with the owner's manual provided, conforms with the essential health and safety requirements of the above machinery directive.

**UKCA LEGISLATION  
(SUPPLY OF MACHINERY (SAFETY) REGULATIONS 2008 S.I. 2008:1597)**



**UKCA DECLARATION OF CONFORMITY**

We HODGE CLEMCO LTD declare that the supplied equipment when installed and used in accordance with the owner's manual provided, conforms with the essential health and safety requirements of the above UKCA legislation.

A handwritten signature in black ink, appearing to read 'Steven Staples'.

**STEVEN STAPLES**  
Engineering Manager

A handwritten signature in black ink, appearing to read 'J. Horne'.

**JOHN HORNE**  
Manufacturing and Operations Director

**MAINTENANCE INSPECTION CONTRACT**

In response to numerous requests, we are now able to offer a Maintenance Inspection Contract for your Clemco Equipment.

These requests have been made by customers who appreciate the benefits of regular inspection/servicing on a planned basis. The remedial work that follows a breakdown or worse, the need for early equipment replacement due to accelerated wear may easily exceed

the cost of a Maintenance Inspection Contract. If you would like further detail please contact our Customer Services Department on **0114 2548811**

A request for more information does not represent any form of commitment on your behalf, so can you afford to say 'NO' at this stage?

We look forward to hearing from you soon.

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## 1.0 SCOPE OF MANUAL

This owner's manual applies exclusively to the operation and maintenance of the HOLLO-BLAST pipe cleaning tool. The owner's manual for the blast machine must also be observed.

## 2.0 APPLICATIONS AND RESTRICTIONS

The HOLLO-BLAST pipe cleaning tool is designed to blast the inside of pipes with diameters between 65 mm and 300 mm. All standard blast media can be used. However, increased wear is to be expected when using aluminium oxide and silicon carbide. The blast media should be dry and free from contaminants. We recommend a grain size of max. 1 mm for HBN-8 nozzles and 1.0 - 1.4 mm for HBN10 nozzles. If the grain size is too large or too much blast media is used, the tool will become blocked.

## 3.0 DESCRIPTION OF EQUIPMENT

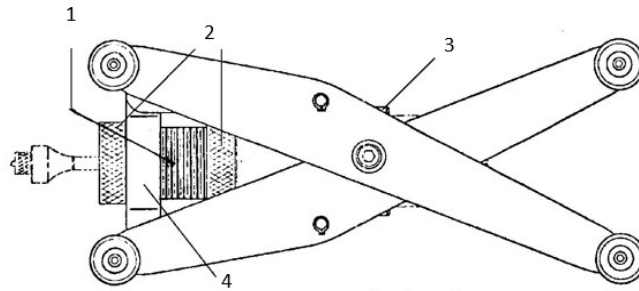


FIGURE 1: HOLLO-BLAST with Centering Carriage (HBC-2)

HOLLO-BLAST PIPE CLEANING TOOL WITH CENTRING CARRIAGE: HBC-2 (SEE ABOVE IMAGE)	
1	Threaded Pipe
2	Lock nut
3	Central mounting ring
4	Front mounting ring

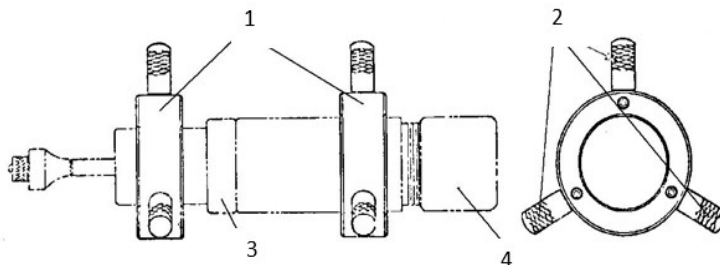


FIGURE 2: HOLLO-BLAST with centering pins (HBC-1)

HOLLO-BLAST PIPE WITH CENTERING PINS: HBC-1 (SEE ABOVE IMAGE)	
1	Guided Rings
2	Central Pins (Various Sizes)
3	Lock Nut
4	Holder HEP 1 or 2

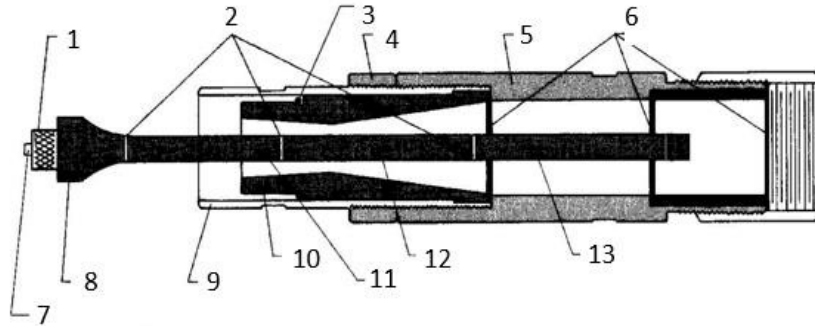


FIGURE 3: INDIVIDUAL HOUSING COMPONENTS

HOLLO-BLAST INDIVIDUAL HOUSING COMPONENTS (SEE ABOVE IMAGE)	
1	Nut
2	Cone
3	Threaded rod
4	Brass washers
5	Nozzle
6	Threaded pipe
7	O-Ring
8	Lock nut
9	Housing
10	Rubber seals
11	Tube
12	Tube
13	Holder

Figures 1, 2 and 3 show the main components of the pipe cleaning tool:

- Centring device which can be adjusted to different pipe diameters with
  - Centring pins for pipe diameters between 3" TO 5" (HBC-1, see Fig 2) or
  - Centring carriage for pipe diameters between 5" and 12" (HBC-2, see Fig 1).
  
- Housing with:
  - Nozzle.

- Cone for blast media deflection.
- 2 tubes made from boron carbide or cemented carbide to protect the rod.
- Threaded rod.
- Connection thread for nozzle holder (HEP 1 or 2) or lance (blast media hose).

The HOLLO-BLAST pipe cleaning tool is connected to the blast machine in place of the nozzle and is intended for one-man operation. It directs the blast media/air mixture to the cone. The cone deflects the blast media so that the pipe to be cleaned is blasted evenly across its internal diameter as the pipe cleaning tool is pulled slowly through the pipe. The centring device ensures that the tool is centered in the pipe.

## 4.0 OPERATION

### 4.1 REQUIREMENTS

#### 4.1.1 BLAST EQUIPMENT

Blasting with the HOLLO-BLAST pipe cleaning tool requires the same blast equipment as the blasting process with a nozzle.

- Blast Machine
- Compressor for the air supply.
- Blast Hose (32x8mm recommended)
- Operator protection: Air fed helmet, Resistant clothing + Breathing air supply (air filter)

#### 4.1.2 AIR AND BLAST MEDIA CONSUMPTION

There must be a sufficient supply of compressed air and blast media (see table below)

BLAST MEDIA AND AIR CONSUMPTION TABLE						
NOZZLE SIZE (mm)	AIR CONSUMPTION [m <sup>3</sup> /min.] AT PRESSURE (bar)			BLAST MEDIA CONSUMPTION (l/h) AT PRESSURE (bar)		
	6	9	12	6	9	12
12.5	5	7	9	290	410	530
16	10	15	19	630	930	1200

### 4.2 SET-UP

(1) Mount the centring device and adjust for the pipe diameter to be blasted.	<p><b>For pipe diameters from 3" to 5", use centring pins (HBC-1, see Fig 2).</b></p> <ul style="list-style-type: none"> <li>• Select the right centring pin length (tool centred in the middle of the pipe).</li> <li>• Insert the centring pins into the holes in the guide rings and secure with the hexagon socket screws.</li> <li>• Fasten the guide ring with the larger internal diameter in place over the groove on the housing using a hexagon socket screw.</li> <li>• Secure the second guide ring on the front of the threaded pipe with both lock nuts.</li> </ul>
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	<p><b>For pipe diameters from 5" to 12", use a centring carriage (HBC-2, see Fig 1).</b></p> <ul style="list-style-type: none"> <li>• Push the housing through the central mounting ring of the centring carriage and screw the first lock nut onto the threaded pipe.</li> <li>• Keep pushing the housing through the front mounting ring of the centring carriage and screw the second lock nut onto the threaded pipe.</li> <li>• Fasten the housing in place over the groove on the central mounting ring using a hexagon socket screw.</li> <li>• Adjust the centring carriage and then secure the front mounting ring with both lock nuts.</li> </ul>
(2) Connect the blast hose.	<ul style="list-style-type: none"> <li>• Nozzle holder</li> <li>• Lance (If blast hose kinks at the connection there will be uneven causing heavy wear on pipe cleaning tool)</li> </ul>

### 4.3 START UP AND OPERATION

When using tubes and a cone made from boron carbide, the pipe cleaning tool must not be subjected to any impact loads as the material is very brittle and can be damaged easily. Blasting with damaged tubes will destroy the pipe cleaning tool extremely quickly!

(1) Push the pipe cleaning tool through the pipe to be cleaned all the way to the end.	<b>Attention: The tip with the cone must not hit any part of the pipe or it will be damaged!</b>
(2) Activate the blast air.	Hold on to the pipe cleaning tool/blast hose.
(3) Blast.	Slowly pull the pipe cleaning tool back towards the operator (the used blast material will be blown forwards out of the pipe).The speed depends on the desired degree of cleaning.
(4) Disable the blast air.	Remove the pipe cleaning tool from the pipe.
(5) Check the tubes and cone for damage and rotate the cone if necessary (to ensure even wear across the circumference).	After 2 - 3 blasting operations.

## 5.0 MAINTENANCE

Check the wear parts regularly for wear/damage and replace if necessary.

### 5.1 REPLACING THE CONE, TUBES AND THREADED ROD

The cone must be replaced when the cylindrical part of the cone (original length: 10 mm) has worn to 1 mm. The tubes and the threaded rod should be replaced at the same time.

The steps below describe the dismantling/mounting process (see also Figure 3).

<p><b>(1)</b> <i>Clean the HOLLO-BLAST pipe cleaning tool.</i></p>	<ul style="list-style-type: none"> <li>* Unscrew the blast hose with nozzle holder/lance.</li> <li>* Remove the blast media from cracks and threads (blow off with compressed air)</li> </ul>
<p><b>(2)</b> <i>Dismantling the cone, tubes, and threaded rod.</i></p>	<ul style="list-style-type: none"> <li>* Open the nut on the head.</li> <li>* Carefully remove the cone, tubes, and copper washers from the threaded rod.</li> <li>* Pull the threaded rod out of the holder from the nozzle holder connection thread side.</li> </ul>
<p><b>(3)</b> <i>Mounting the cone, tubes, and threaded rod.</i></p>	<p>Follow the steps in reverse order:</p> <ul style="list-style-type: none"> <li>* Threaded rod.</li> <li>* First copper washer (attenuator function).</li> <li>* 2 Tubes.</li> <li>* Second copper washer (attenuator function).</li> <li>* Cone.</li> <li>* Screw on the nut and tighten by hand.</li> </ul> <p><b>During the mounting process, make sure that there is no blast media or dirt between the tubes, cone and copper washers.</b></p>

## 5.2 REPLACING THE NOZZLE AND SEALS

The nozzle of the pipe cleaning tool must be replaced when:

- HBN-8 Nozzle (d=12.5mm) has worn to a diameter of **15mm**
- HBN-10 Nozzle (d=16mm) has worn to a diameter of **18mm**

When replacing the nozzle, all seals should be replaced at the same time. The steps below describe the dismantling/mounting process.

<p><b>(1)</b> <i>Clean the HOLLO-BLAST pipe cleaning tool.</i></p>	<ul style="list-style-type: none"> <li>* Unscrew the blast hose with nozzle holder/lance.</li> <li>* Remove the blast media from cracks and threads (blow off with compressed air)</li> </ul>
<p><b>(2)</b> <i>Disconnect the centring, device from the housing.</i></p>	<p><b>Centring pins (HBC-1, see Figure 2).</b></p> <ul style="list-style-type: none"> <li>* Unscrew both guide rings from the housing.</li> </ul> <p><b>Centring carriage (HBC-2, see Figure 1).</b></p> <ul style="list-style-type: none"> <li>* Unscrew the front lock nut from the threaded pipe and loosen the hexagon socket screw holding the housing in place (central mounting ring).</li> <li>* Pull the housing out of the front mounting ring.</li> <li>* Unscrew the second lock nut and remove the housing from the centring carriage.</li> </ul>



<p><b>(3)</b> Dismantle the nozzle and holder for threaded rod.</p>	<ul style="list-style-type: none"> <li>* Open the nut and remove the cone, tubes, copper washers and threaded rod.</li> <li>* Unscrew the threaded pipe with nozzle out of the housing and pull the nozzle with O-ring out of the threaded pipe.</li> <li>* Remove the holder and seals.</li> </ul>
<p><b>(4)</b> Mount the nozzle and holder.</p>	<ul style="list-style-type: none"> <li>* Fit <b>all</b> seals.</li> <li>* Follow the steps in (3) in reverse order.</li> </ul>

## 6.0 SPARE PARTS

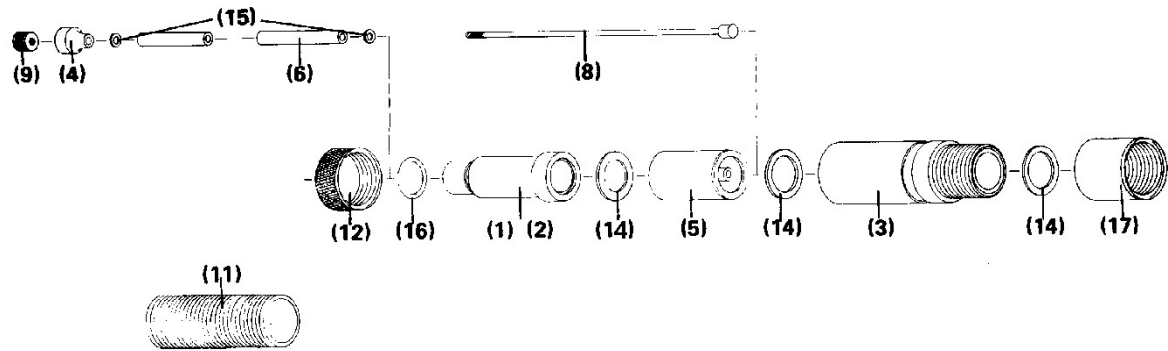


FIGURE 4: SPARE PARTS

**SPARE PARTS TABLE (SEE FIGURE 4)**

ITEM NO.	PART NO.	MODEL	DESCRIPTION
(-)	94290D	HB-B	Hollo-Blast with HBN-8, without carriage, without box
(-)	08446D	HB-O-B	Hollo-Blast with HBN-10, without carriage, without box
(-)	90012D	HB-3	Hollo-Blast complete with nozzle, HBN-8, HBC-1, HBC-2, box
(-)	90013D	HB-4	Hollo-Blast complete with nozzle, HBN-10, HBC-1, HBC-2, box
(-)	HOL90017D	-	Clemco Hollo-Blast - Complete with HBN-8 nozzle
(-)	HOL01124D	HBC-1	Clemco Hollo-Blast - HBC1 Centring Carriage 3"-5" (See Figure 2)
(-)	HOL01131D	HBC-2	Clemco Hollo-Blast - HBC2 Centring Carriage 5"-12" (See Figure 1)
(1)	01406D	HBN-8	Nozzle, 12.5 mm (cemented carbide)
(2)	01407D	HBN-10	Nozzle, 16 mm (cemented carbide)
(3)	01079D	HB-111	Housing
(4)	HOL90014D	HB-110/B (X)	Clemco Hollo-Blast - Boron carbide cone
	01078D	HB-110	Cemented carbide cone
(5)	HOL01080I	HB-112 (X)	Clemco Hollo-Blast - HB112 Stem Support
(6)	HOL90016D	HB-113/B (X)	Clemco Hollo-Blast - HB113B Boron carbide sleeve (x2)
	01084D	HB-113	Cemented carbide tube (x2)
(8)	HOL01086D	HB-115 (X)	Clemco Hollo-Blast - HB115 Threaded rod
(9)	01089D	HB-116	Nut
(11)	01091D	HB-117	Threaded pipe 1 1/4"
(12)	01092D	HB-118	Lock nut (x2)
(14)	HOL01093D	HB-119 (X)	Clemco Hollo-Blast - HB119 Gasket (x3)
(15)	HOL01096D	HB-122 (X)	Clemco Hollo-Blast - HB122 Brass washer (x2)
(16)	HOL01097I	HB-123 (X)	Clemco Hollo-Blast - HB123 O-ring
(-)	100681	HEA-2	Nozzle holder (fine thread) aluminium HEA-2
(-)	27191D	HEA-2	Seal for HEA-2
(-)	93059D		Spare part set = X